

In re Patent Application of:  
DURHAM ET AL.  
Serial No. 10/780,268  
Filing Date: FEBRUARY 17, 2004

REMARKS

Applicants wish to thank the Examiner for his thorough examination of the present application and for identifying allowable subject matter in Claims 14, 15, 26, 27, 38, and 39. The specification was amended to correct a minor typographical error. The patentability of the claims is discussed in greater detail below. Favorable reconsideration is respectfully requested.

I. The Claimed Invention

Independent Claim 1, for example, is directed to a phased array antenna comprising a substrate, and a patterned conductive layer on the substrate. The patterned conductive layer defines a plurality of slotted dipole antenna elements each having a medial feed portion associated therewith. Each slotted dipole antenna element comprises a pair of slotted legs extending outwardly from the medial feed portion. Pairs of adjacent slotted legs of adjacent slotted dipole antenna elements include respective spaced apart end portions having predetermined shapes and relative positioning to provide increased inductive coupling between the adjacent slotted dipole antenna elements. Independent Claim 28 is a method counterpart and includes features similar to Claim 10.

Independent Claim 16 is directed to a phased array antenna comprising a patterned conductive layer defining an array of slotted dipole antenna elements each having a medial feed portion associated therewith. Each slotted dipole antenna element comprises a pair of slotted legs extending outwardly from the medial feed portion. Pairs of adjacent

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slotted legs of adjacent slotted dipole antenna elements include respective spaced apart end portions having predetermined shapes and relative positioning to provide increased inductive coupling between the adjacent slotted dipole antenna elements. A ground plane is adjacent the plurality of slotted dipole antenna elements.

II. Claim 1-13, 17-25, and 28-37 Are Patentable

The Examiner rejected Claims 1-13, 17-25, and 28-37 as unpatentable over the Durham patent. The Durham patent discloses a phased array antenna including a dipole layer that forms a plurality of dipole antenna elements with a medial feed portion and a pair of legs extending outwardly therefrom. The dipole layer is a printed conductive layer having an array of dipole antenna elements on a flexible substrate.

In contrast, independent Claim 1 includes a patterned conductive layer that defines a plurality of slotted dipole antenna elements each having a medial feed portion associated therewith. In other words, the slotted dipole antenna elements are holes cut into the pattern conductive layer as shown in FIGS. 8 and 9, and described at paragraph [0029]. This is the inverse of the dipole layer of the prior art Durham patent in which the conductive layer forms the dipole antenna elements as shown in FIGS. 3, 4A, and 4B, and described at column 4, lines 30-34 of the Durham patent. Thus, the Durham patent fails to disclose, and indeed teaches away from, a patterned conductive layer that defines a plurality of slotted dipole antenna elements each having a medial feed portion associated therewith as in the claimed

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invention. Independent Claims 16 and 28 include features similar to Claim 1 and are patentable for the same reasons.

Accordingly, independent Claims 1, 16, and 28 are believed patentable. The dependent claims, which recite yet further distinguishing features of the invention, are also patentable, and require no further discussion.

CONCLUSIONS

In view of the arguments presented above, it is submitted that all of the claims are patentable. Accordingly, a Notice of Allowance is respectfully requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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CERTIFICATE OF FACSIMILE TRANSMISSION

I HEREBY CERTIFY that the foregoing correspondence has been forwarded via facsimile number 703-872-9306 to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 this 6th day of July, 2005.

